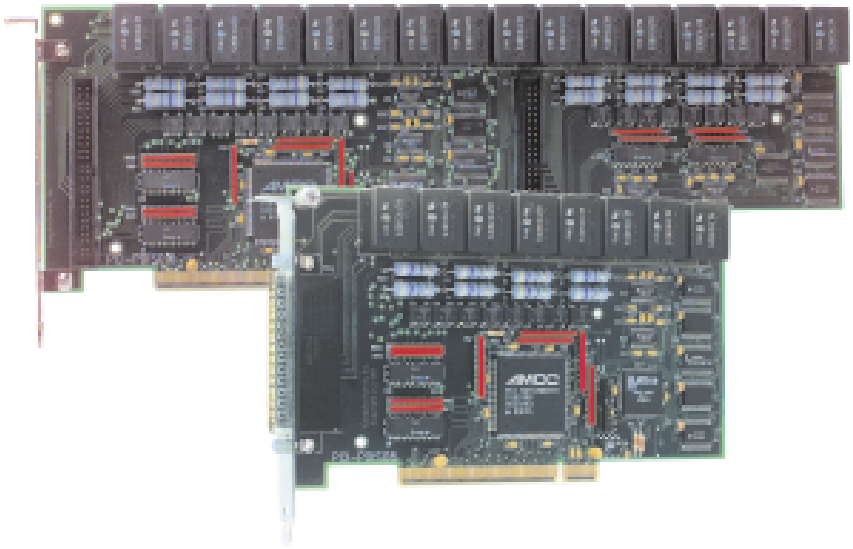
PCI-PDISO16 & PCI-PDISO8

16 and 8 Channel, PCI-bus Compatible, High Voltage, High CurrentDigital I/O Boards



Features

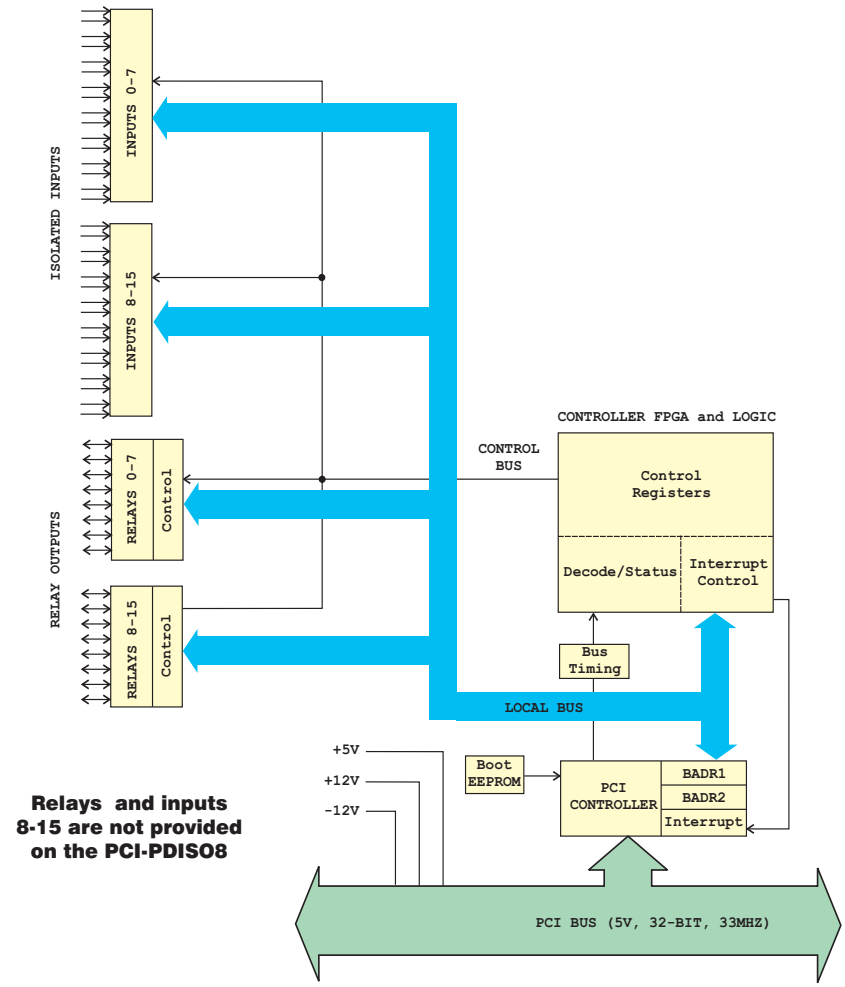
PCI-PDISO16

- 16 high voltage (5V-28V) AC/DC digital input channels
- 16 form C electromechanical relays
- 3 Amp, 120VAC output control
- Software & Connector compatible with CIO-PDISO16

PCI-PDISO8

- 8 high voltage (5V-28V) AC/DC digital input channels
- 5 form C, 3 form A (NO) relays
- 3 Amp, 120VAC output control
- Software & Connector compatible with CIO-PDISO8

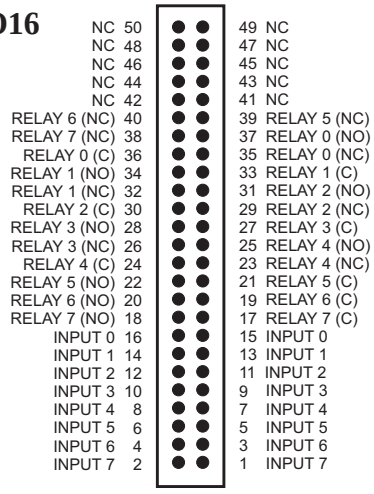
Block Diagram



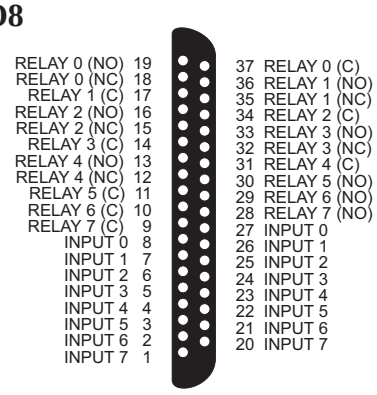
Relays and inputs 8-15 are not provided on the PCI-PDISO8

Connector Diagrams

PCI-PDISO16

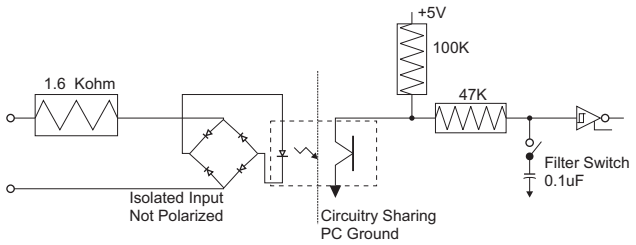

NC 50 | 49 NC
NC 48 | 47 NC
NC 46 | 45 NC
NC 44 | 43 NC
NC 42 | 41 NC
RELAY 6 (NC) 40 | 39 RELAY 5 (NC)
RELAY 7 (NC) 38 | 37 RELAY 0 (NO)
RELAY 0 (C) 36 | 35 RELAY 0 (NC)
RELAY 1 (NO) 34 | 33 RELAY 1 (C)
RELAY 1 (NC) 32 | 31 RELAY 2 (NO)
RELAY 2 (C) 30 | 29 RELAY 2 (NC)
RELAY 3 (NO) 28 | 27 RELAY 3 (C)
RELAY 3 (NC) 26 | 25 RELAY 4 (NO)
RELAY 4 (C) 24 | 23 RELAY 4 (NC)
RELAY 5 (NO) 22 | 21 RELAY 5 (C)
RELAY 6 (NO) 20 | 19 RELAY 6 (C)
RELAY 7 (NO) 18 | 17 RELAY 7 (C)
INPUT 0 16 | 15 INPUT 0
INPUT 1 14 | 13 INPUT 1
INPUT 2 12 | 11 INPUT 2
INPUT 3 10 | 9 INPUT 3
INPUT 4 8 | 7 INPUT 4
INPUT 5 6 | 5 INPUT 5
INPUT 6 4 | 3 INPUT 6
INPUT 7 2 | 1 INPUT 7

PCI-PDISO8


RELAY 0 (NO) 19 | 37 RELAY 0 (C)
RELAY 0 (NC) 18 | 36 RELAY 1 (NO)
RELAY 1 (C) 17 | 35 RELAY 1 (NC)
RELAY 2 (NO) 16 | 34 RELAY 2 (C)
RELAY 2 (NC) 15 | 33 RELAY 3 (NO)
RELAY 3 (C) 14 | 32 RELAY 3 (NC)
RELAY 4 (NO) 13 | 31 RELAY 4 (C)
RELAY 4 (NC) 12 | 30 RELAY 5 (NO)
RELAY 5 (C) 11 | 29 RELAY 6 (NO)
RELAY 6 (C) 10 | 28 RELAY 7 (NO)
RELAY 7 (C) 9 | 27 INPUT 0
INPUT 0 8 | 26 INPUT 1
INPUT 1 7 | 25 INPUT 2
INPUT 2 6 | 24 INPUT 3
INPUT 3 5 | 23 INPUT 4
INPUT 4 4 | 22 INPUT 5
INPUT 5 3 | 21 INPUT 6
INPUT 6 2 | 20 INPUT 7
INPUT 7 1

Functional Description

The PCI-PDISO16 and PCI-PDISO8 combine isolated AC or DC inputs and electromechanical relays on a single PCI-bus compatible board. The PCI-PDISO16 provides sixteen 24V AC or DC inputs and 16 form C, 3 Amp relays. The PCI-PDISO8 offers eight 24V AC or DC and eight 3 Amp relay outputs (5 form C, 3 form A). A software enabled input filter is available on all channels. A schematic diagram of one of the input channels is shown below.



The boards are fully connector compatible with their ISA counterparts (CIO-PDISO16 & CIO-PDISO8). Both boards are also completely plug-and-play. There are no switches, or jumpers on the board. All board addresses, interrupt channels etc. are set by your computers plug-and-play software.

Specifications

Relay Specifications

Contact Configuration	
PCI-PDISO16	16 form C
PCI-PDISO16	5 form C, 3 form A (NO)
Contact Rating	3A @ 120VAC or 28VDC resistive
Contact Type	Gold overlay silver
Contact Resistance	100 milliohms max
Operate Time	20 milliseconds
Release Time	10 milliseconds max
Vibration	10 to 55 Hz (Dual amplitude 1.5mm)
Dielectric Isolation	500V (1 minute)
Life Expectancy	10 milllion mechanical operations, min

Isolated Inputs

PCI-PDISO16	16
PCI-PDISO8	8
DC input ranges	
Vin low	1.8 V, max
Vin high	5 V, min
AC input ranges (50-1000Hz)	
Vin low	1.8 Vp-p, max
Vin high	5.0 Vp-p, min
Max input voltage	28VDC, or 28VRMS (50-1000Hz)
Isolation	500V
Resistance	1.6 K Ohms min
Response w/o filter	20 uS (without filter) 5 mS (with filter)
Filter Control	Individually programmable, Filters disabled on power-up/reset

Power consumption (+5V)

PCI-PDISO16	0.7 A, all relays OFF 2.0 A, all relays ON
PCI-PDISO16	0.4 A, all relays OFF 1.0 A, all relays ON

Environmental

Operating / storage temp	0 to 50 °C / -20 to 70 °C
Humidity	0 to 90% non-condensing

Software

ThePCI-PDISO series boards come complete with ComputerBoards's powerful ***InstaCal***™ software package. ***InstaCal*** is a complete installation, calibration and test program for ComputerBoards data acquisition boards. Complete with extensive error checking, *InstaCal* guides you through installation and setup of your data acquisition board and creates the board configuration file for use by your program or application software package. *InstaCAL* is described in the software section of this catalog handbook.

InstaCAL provides installation, calibration and test functions for all of our boards!

The boards are fully supported by ComputerBoards' powerful UniversalLibrary. Universal Library is a complete set of I/O libraries and drivers for all of our boards, for all Windows based languages. When using the Universal Library you can switch boards or even programming languages and the syntax remains constant. Universal Libraryis fully described in the software section of this handbook.

The PCI-PDISO series boards are fully supported by a wide variety of applications software packages including DAS-Wizard™, (and DAS-Wizard Pro™), HP VEE®, Labtech Notebook® and LabVIEW®. For further details of these, as well as a number of other software packages, please refer to the software section provided earlier in this handbook. Thirty-day time locked versions and demos of many of these and other software packages are available for downloading on our web site.

Ordering Guide

PCI-PDISO16	16 Channel PCI bus compatible high voltage (AC or DC) input board with 16 electromechanical relays.
CPCI-PDISO16	16 Channel Compact PCI® bus compatible high voltage (AC or DC) input board with 16 electromechanical relays.
PCI-PDISO8	8 Channel PCI bus compatible high voltage (AC or DC) input board with 8 electromechanical relays.
CPCI-PDISO16	16 Channel Compact PCI® bus compatible high voltage (AC or DC) input board with 16 electromechanical relays.

Screw Terminal Boards The PCI-PDIS016 board is compatible with the CIO-MIN50 via CFF50-xx series cables while the PCI-PDISO8 is compatible with the CIO-MINI37 via C37FF-xx cables. *ComputerBoards cautions against the use of screw terminal boards in high voltage applications unless specific and professionally designed precautions are taken to avoid the possibility of accidental contact with hazardous high voltage signals.*